



The UK's Leading Cancer Information Service

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Understanding secondary cancer in the bone

From the CancerBACUP booklet series

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Bisphosphonates

There are two different types of cells found in bone – osteoclasts and osteoblasts. Osteoclasts destroy the old bone and osteoblasts deposit new minerals and build new bone. Cancer cells that have spread to the bone produce chemicals that influence the activity of these cells, upsetting the normal balance. This commonly causes small holes in the bone due to overactivity of the osteoclasts.

Bisphosphonates are drugs that restrict the action of the osteoclasts (the cells that destroy bone). They are not a treatment for the cancer itself but may help to reduce the breakdown of the bone and so reduce the risk of fracture and discomfort. Increasingly, doctors are recommending the long-term use of bisphosphonates as a way of treating bone pain, preventing broken bones and reducing the need for radiotherapy treatment. Bisphosphonates are also commonly used to treat high blood calcium levels (see [treating hypercalcaemia](#)).

Bisphosphonates may be given into a vein (intravenously) in the outpatient department or, where facilities allow, in the patient's own home or at their GP's surgery, every 4-6 weeks. Some bisphosphonates can be taken by mouth as tablets but these must be taken on an empty stomach an hour before food.

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